

Press Release

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Scientists Change Process of Drawing Blood Samples

The process of drawing blood samples will soon change the face, or rather, the finger of the medical industry. A Russian-American scientific team is in the final prototype development stage of a laser skin perforator that will eliminate the use of needles or lancets.

The device was first invented by Russian scientists and is being refined by researchers at the University of Arkansas for Medical Sciences. The laser skin perforator is considered unique throughout the international health care community. It allows the skin to be punctured and blood drawn without the use of a sharp instrument. The primary project objectives are a reduction in hazardous medical waste and an increase in lives saved through decreased accidental sticks with contaminated needles or lancets.

"Basically, the laser perforator is made up of a solid-state laser that is configured to produce an extremely powerful and brief pulse of laser light," said Dr. Stephen Flock, co-investigator of the project at UAMS. "This light is invisible to human eyes but is strongly absorbed by skin; consequently, with this device it is possible to produce a very precise and controllable perforation without touching the skin," he added.

Flock obtained his Bachelor's degree at the University of Alberta in Edmonton, Alberta; his Master's degree at Queen's University at Kingston, Ontario; and his Ph.D. in applied nuclear/medical physics at McMaster University in Hamilton, Ontario. After two years of medical

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laser research at the University of Texas - M.D. Anderson Cancer Center, Flock was recruited by UAMS as Laboratory Research Director and Co-Director, with Dr. Milton Waner, of the Phillips Classic Biomedical Laser Research Laboratory. Both Flock and Waner are members of the laser perforator project's scientific team.

Others on the scientific and management team include: Drs. Boris Zubov, Igor Troitsky, Vladimir Ivashkov, and Vladimir Zharov all of the Moscow State Technical University; and, Charles Vestal, Graham Catlett, and Craig Shadler of Venisect.

Venisect, Inc. of Little Rock brought this project to Arkansas through its technology transfer efforts for eventual commercialization and distribution. In addition, Venisect received a \$49,638 investment from the Arkansas Science & Technology Authority for the cooperative development of the laser skin perforator.

Photo Caption:

Dr. Stephen Flock of UAMS describes the interior configuration of the Russian laser skin perforator prototype. He is an Assistant Professor and Director of Research in the Department of Otolaryngology -- Head and Neck Surgery. Dr. Flock is also Co-director of the Phillips Classic Biomedical Laser Research Laboratory.